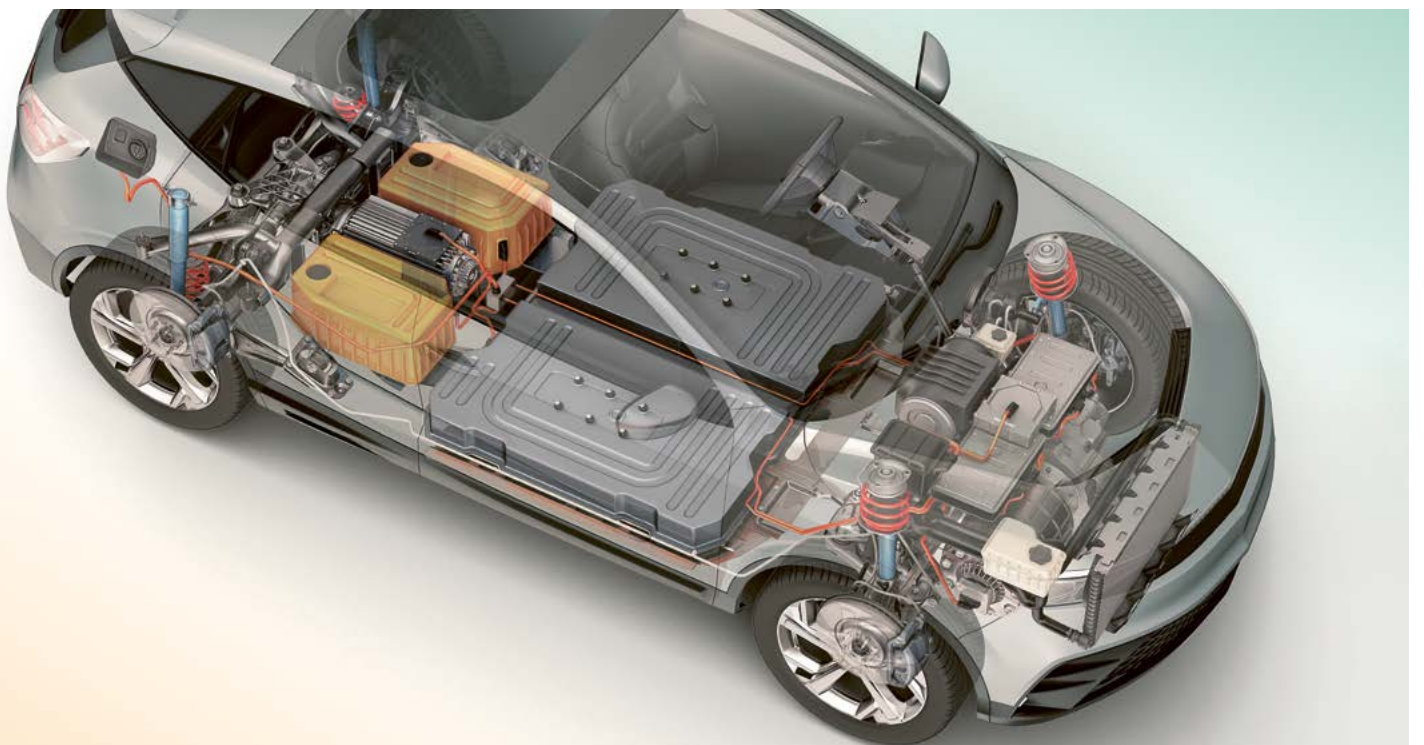


REGLOPLAS⁺

We get everything in shape.

Advanced Temperature Control Units for die casting solutions.



Everything for Advanced Temperature Control

Advanced Temperature Control Units

Our temperature control units are designed with one or two circuits and an intelligent control system. These units support demanding applications and ensure accurate and stable processes, 24/7. They are specifically built for rough die casting environments, include additional compensation tanks, and can easily handle fluctuations in temperature and pressure. With water as the heat transfer medium, our units support temperatures up to 200 °C, while our oil-based units can go up to 350 °C.



6'000 t
Die casting machine



P160LD



300LD



jetPulse



Efficient cooling of hot-spots

The jetPulse system is a highly adaptable solution for precise cooling of hot-spots. It is designed to efficiently cool areas where traditional temperature control methods are insufficient. Faster cycle times, more reliable process control, and flexibility can be achieved. The product serves up to 6 distributors, each with 8 channels, including flow rate monitoring. Additionally, the jetPulse features an integrated automatic core break monitoring step in each cycle.

multiFlow distributors for die casting

Regloplas offers a fully integrated and most flexible multiple distributor system, suitable for small, MEGA and GIGA die casting applications. It's available with 4 to 16 channels, each of them equipped with a manual or automatic valve for individual control of the flow rate. The system measures temperature and flow rate on each channel individually, enabling specific temperature control for each circuit of the mold. The system and software are fully integrated into the controller and display of the temperature control unit.



multiFlow distributors

The original. Since 1961.

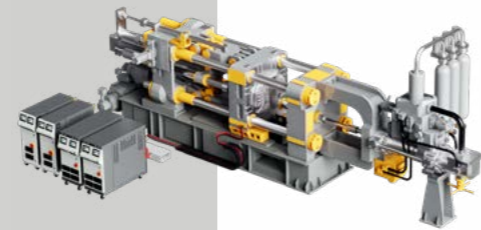
Our knowledge for the die casting industry!

- We master Advanced Temperature Control
- We comprehend your needs – from small to MEGA and GIGA
- We understand necessary timing
- We operate across multiple markets
- We live to overcome challenges
- We support you globally

We meet the most demanding standards in die casting processes – and beyond.

1'000t Die casting machine

Locking force	1'000 t	
Shot weight	kg	5
Die size	mm	640×480×200
Die weight	t	0.5
Application	Consumer products	

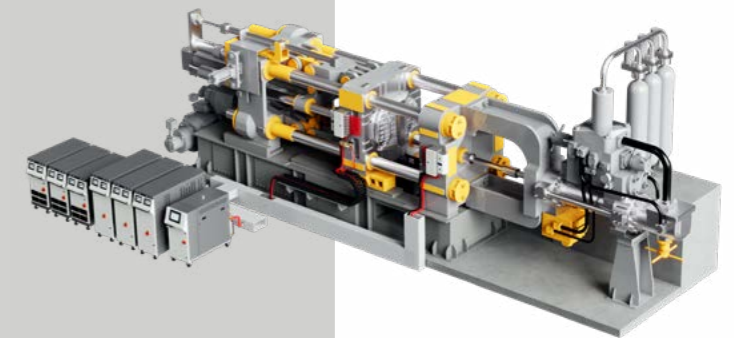


Products

2× 300MD
2× P160LD

3'000t Die casting machine

Locking force	3'000 t	
Shot weight	kg	50
Die size	mm	1000×900×350
Die weight	t	2.5
Application	Industrial housings	



Products

3× 300LD
3× P160LD
1× jetPulse 100
2× multiFlow

6'000t Die casting machine

Locking force	6'000 t	
Shot weight	kg	85
Die size	mm	2100×2100×1600
Die weight	t	55
Application	Automotive	

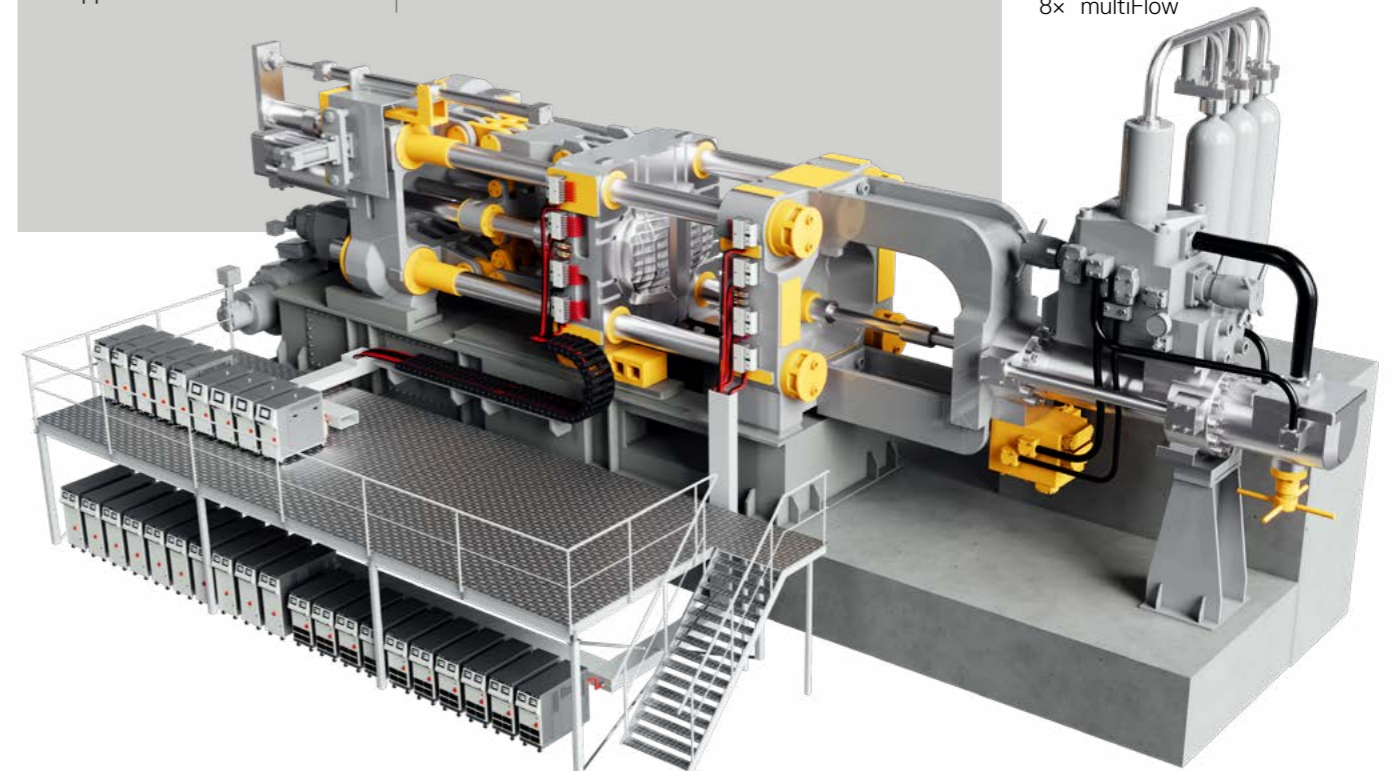


Products

Bottom Row
10× P160LD
Upper Row
5× 300LD
2× jetPulse 100L
4× multiFlow

9'000t Die casting machine

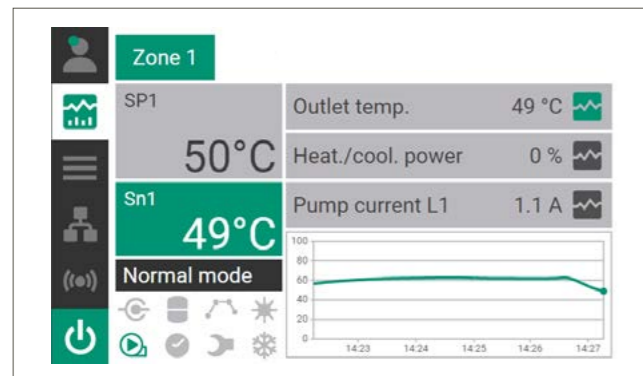
Locking force	9'000 t	
Shot weight	kg	190
Die size	mm	3300×3000×1500
Die weight	t	117
Application	Automotive	



Products

Bottom Row
10× 300LD
5× P160LD
5× P180LD
Upper Row
8× P161XL
4× jetPulse 100
8× multiFlow

Regloplas RT200 controller and machine interfaces



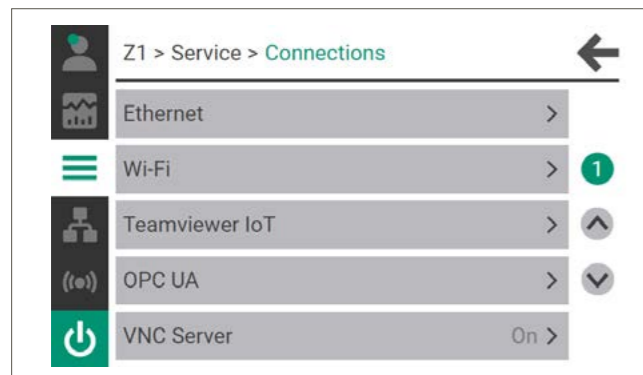
Main screen

- Target- and actual temperature
- Outlet- and inlet-temperature
- External probe temperature
- Real time trend graph (user selectable value)
- Unit status information
- Operating mode information
- Main screen can be customized



Main menu

- Modern touch interface
- Quick access to main functions with one touch
- Large and self-explaining icons
- Robust design



Connectivity functions menu

- Ethernet settings
- WiFi configuration (Client or access point)
- TeamViewer settings
- OPC UA settings
- VNC server settings

	Flow [lpm]		Delta T [°C]	Temp. [°C]	
1	5.0	6.1	2	0	70 67
2	5.0	4.8	3	0	70 67
3	4.0	3.9	3	0	70 67
4	2.5	2.3	3	0	70 67
5	5.0	6.1	2	0	70 67
6	5.0	4.8	3	0	70 67
7	4.0	3.9	3	0	70 67
8	2.5	2.3	3	0	70 67

Fully integrated multiFlow menu

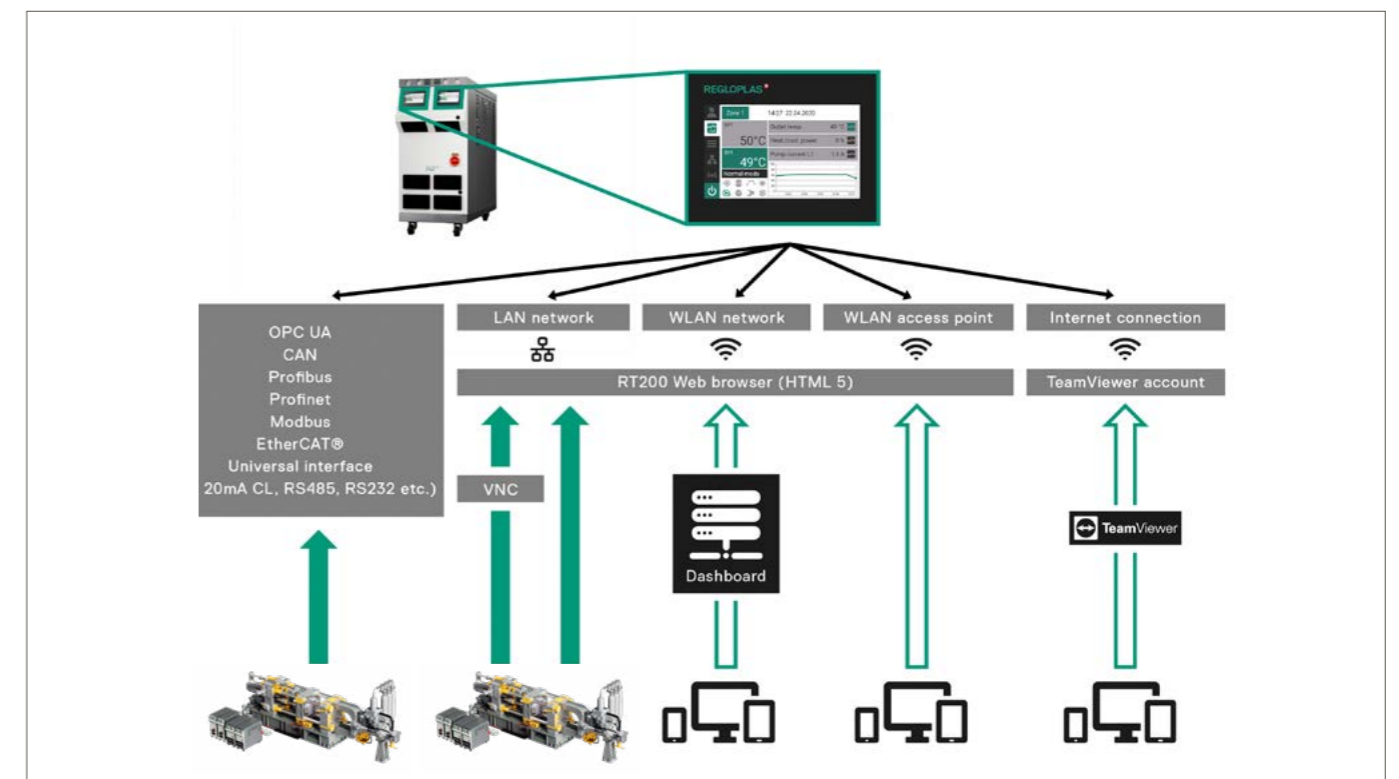
- Control of multiFlow distributor fully integrated into RT200 controller
- Monitoring and warning functions included
- TeamViewer settings
- Flow control (l/min) or Delta-T control (°C) for each channel individually
- User friendly and easily accessible

Unmatched connectivity and countless interfaces

- Direct access via web browser (HTML 5), TeamViewer and VNC
- No additional hardware, gateways, or apps needed
- Unit control can easily be integrated into die casting machine control
- Additional functionality with Regloplas Dashboard
- Software update online via internet connection

Technical features

- LAN and WLAN standard on all units
- OPC UA interface integrated in controller
- OPC UA and many other interfaces
- USB interface for data logging



High temperature oil units up to 350 °C / 662 °F



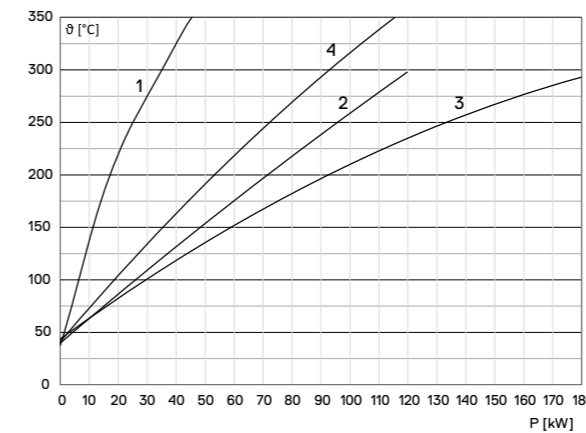
High temperature oil		300 / 350 °C					
Temperature control unit/Type		300MD		300LD		350LD	
Outlet temperature max.	°C/°F	300/572		300/572		350/662	
Heat transfer medium		Oil		Oil	Oil	Oil	Oil
Filling quantity	l	22.0		15.0	24.0	15.0	24.0
Expansion volume	l	14.0		20.0	20.0	20.0	20.0
Heating capacity at 400 V	kW	12 ¹¹		10/17.5/20/30/40 ¹¹	10/17.5/20/30/40 ¹¹	20 ¹¹	
Cooling capacity	kW	130 ¹¹		160 ¹¹		30 ¹¹	85 ¹¹
Cooler		1K		1K ¹²		1K ¹²	2K ¹²
at outlet temperature	°C	280		280		280	280
at cooling water temperature	°C	20		20		20	20
Diagram		2		3		1	4
Pump capacity/Type		FM32	FM35	FM65		FM65	
Flow rate max.	l/min.	80 ¹¹	85 ¹¹	90 ¹¹		90 ¹¹	
Power consumption	kW	1.5 ¹¹	2.2 ¹¹	2.8 ¹¹		2.8 ¹¹	
Pressure max.	bar	7.5 ¹¹	8.0 ¹¹	9.5 ¹¹		9.5 ¹¹	
Diagram		1	2	3		3	
Control system		RT100/RT200		RT100/RT200		RT100/RT200	
Measuring mode (Standard)		Pt100		Pt100		Pt100	
Operating voltage	V; Hz	400-480; 50/60		200-600; 50/60		200-600; 50/60	
Connections							
Outlet/Inlet		G3/4" IG		G3/4" IG		G3/4" IG	
Cooling water mains		G1/2"		G3/4"		G3/4"	
Degree of protection	IP	IP54		IP54		IP54	
Dimensions W/H/D	mm	400/1150/1349		432/1350/1476	542/1351/1474	546/1621/1465	
Weight	kg	235		246	365	323	373
Color	RAL	9006/7016		9006/7016		9006/7016	
Ambient temperature max.	°C	40		40		40	
Noise level	dB(A)	<70		<70		<70	

Note

- G Parallel thread
- IG Female thread
- SK Low-scale cooler
- D Dual zone unit
- 11 Dual zone unit: Data per zone
- 12 With cooler bypass switch

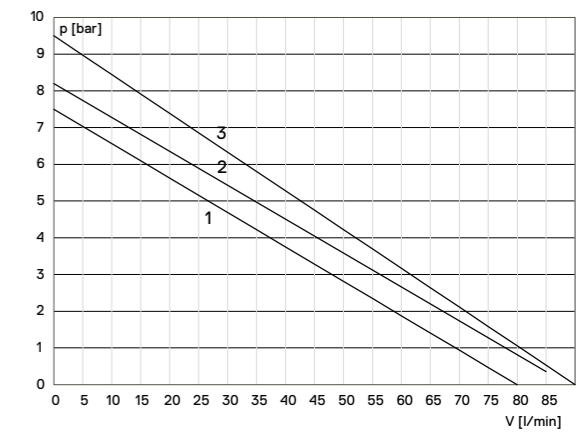
Cooling- and pump capacity

Cooling capacity P depending on the outlet temperature θ
Cooling water data at inlet temperature +20 °C
Curve 1/2/3/4 »Flow-rate per circuit 20l/min«



- 1 350L(D) 1K
- 2 300MD
- 3 300L(D) 1K
- 4 350L(D) 2K

Pump capacity. Flow rate V depending on the pressure p
Bypass is not taken into consideration. Density 1000kg/m³



- 1 FM32
- 2 FM35
- 3 FM65

Pressurized water units up to 160 °C / 320 °F



Pressurized water	160 °C	160 °C	160 °C
Temperature control unit/Type	P160LD	P161XL	ATW160
Outlet temperature max.*	°C/°F 160/320	160/320	160/320
Heat transfer medium	Water	Water	Water/Water-glycol
Filling quantity	l 3.0	10.0	40/45/50
Expansion volume	l 2.0	5.0	
Heating capacity at 400 V	kW 17 ¹¹	20 40 60	20 40 60 80 100 120
Cooling capacity	kW 66 ¹¹ 78 ¹¹	135	80 180 170 360 250 550
Cooler	SK 2SK	SK	SK25 SK25 SK32 SK32 SK40 SK40
at outlet temperature	°C 150	150	60 130 60 130 60 130
at cooling water temperature	°C 20	20	
Diagram	1 2	3	4 4 5 5 6 6
Pump capacity/Type	SM82	SM85 PM85 ¹²	NBHT-12-75-075 NBHT-20-50-075 NBHT-26-55-075
Flow rate max.	l/min. 80 ¹¹	200 150	300 400 500
Power consumption	kW 2.8 ¹¹	3.5 5.3	7.5 7.5 7.5
Pressure max.	bar 9.0 ¹¹	8.0 8.5	6.9 4.9 5.8
Diagram	1	2 3	4 5 6
Control system	RT100/RT200	RT100/RT200	RT100/RT200
Measuring mode (Standard)	Pt100	Pt100	Pt100
Operating voltage	V; Hz 400; 50, 3PE	200-600; 50/60	400-460; 50/60
Connections			
Outlet/Inlet	G3/4"	G1 1/2" IG	DN50-DN65
Cooling water mains	G1/2"	G3/4"	DN 25 DN 32 DN 40
Degree of protection	IP IP54	IP54	IP54
Dimensions W/H/D	mm 507/1167/1492	432/1350/1554	680-880/1960-2160/2250
Weight	kg 280	265	580-880
Color	RAL 9006/7016	9006/7016	7016/7035
Ambient temperature max.	°C 40	40	40
Noise level	dB(A) <70	<70	<70

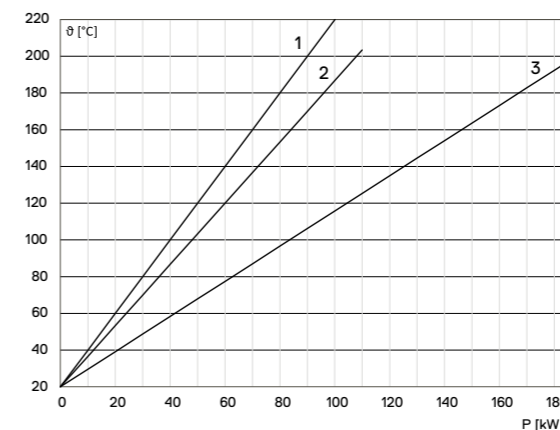
* Water treatment recommended from 140 °C / 284 °F and required from 180 °C / 356 °F

Note

- G Parallel thread
- IG Female thread
- SK Low-scale cooler
- D Dual zone unit
- 11 Dual zone unit: Data per zone
- 12 With frequency converter only

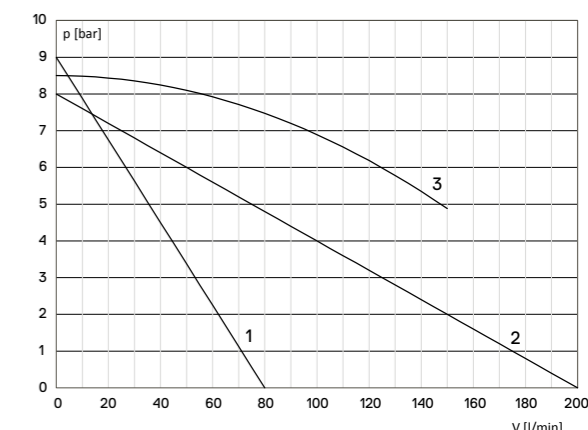
Cooling- and pump capacity

Cooling capacity P depending on the outlet temperature ϑ
Cooling water data at inlet temperature +20 °C
Curve 1/2 »Flow-rate per circuit 20l/min«
Curve 3 »Flow-rate per circuit 30l/min«



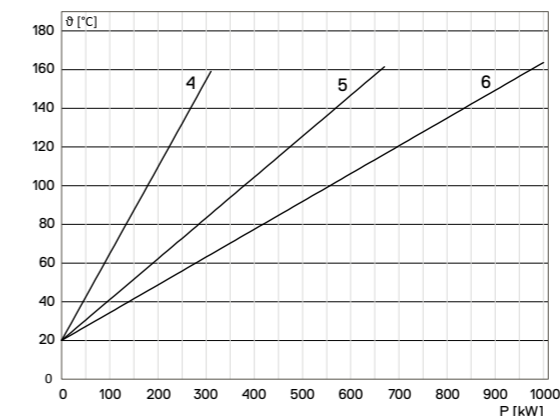
- 1 P160LD SK
- 2 P160LD 2SK
- 3 P161XL SK

Pump capacity. Flow rate V depending on the pressure p
Bypass is not taken into consideration. Density 1000kg/m³



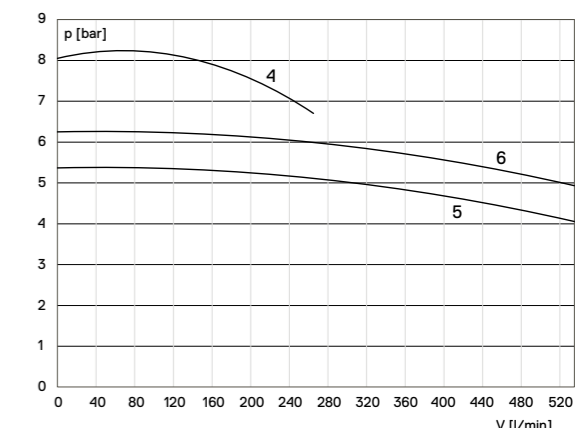
- 1 SM82
- 2 SM85
- 3 PM85

Cooling capacity P depending on the outlet temperature ϑ
Cooling water data at inlet temperature +20 °C
Curve 4 »Flow-rate per circuit 50 l/min«
Curve 5 »Flow-rate per circuit 100 l/min«
Curve 6 »Flow-rate per circuit 150 l/min«



- 4 ATW160-DG SK25
- 5 ATW160-DG SK32
- 6 ATW160-DG SK40

Pump capacity. Flow rate V depending on the pressure p
Bypass is not taken into consideration. Density 1000kg/m³



- 4 NBHT-12-75-075
- 5 NBHT-20-50-075
- 6 NBHT-26-55-075

Pressurized water units up to 200 °C / 392 °F



Pressurized water		180 °C		200 °C			
Temperature control unit/Type		P180LD		P181XL	200LD		P200XL
Outlet temperature max.*	°C/°F	180/356		180/356	200/392		200/392
Heat transfer medium		Water		Water	Water		Water
Filling quantity	l	3.0		10.0	3.0		10.0
Expansion volume	l	2.0		5.0	2.0		5.0
Heating capacity at 400 V	kW	17 ¹¹		20 40 60	17		20 40 60
Cooling capacity	kW	76 ¹¹	90 ¹¹	156	86 ¹¹	103 ¹¹	177
Cooler		SK	2SK	SK	SK	2SK	SK
at outlet temperature	°C	170	170	170	190	190	190
at cooling water temperature	°C	20	20	20	20	20	20
Diagram		1	2	3	1	2	3
Pump capacity/Type		SM82H		SM85H	SM82H		SM85H
Flow rate max.	l/min.	80 ¹¹		200	80 ¹¹		200
Power consumption	kW	2.8 ¹¹		3.5	2.8 ¹¹		3.5
Pressure max.	bar	9.0 ¹¹		8.0	9.0 ¹¹		8.0
Diagram		1		2	1		2
Control system		RT100/RT200		RT100/RT200	RT100/RT200		RT100/RT200
Measuring mode (Standard)		Pt100		Pt100	Pt100		Pt100
Operating voltage	V; Hz	400; 50, 3PE		200-600; 50/60	200-600; 50/60		200-600; 50/60
Connections							
Outlet/Inlet		G3/4"		G1 1/2" IG	G3/4"		G1 1/2" IG
Cooling water mains		G1/2"		G3/4"	G1/2"		G3/4"
Degree of protection	IP	IP54		IP54	P54		IP54
Dimensions W/H/D	mm	507/1167/1492		432/1350/1554	507/1167/1492		432/1350/1554
Weight	kg	280		265	280		265
Color	RAL	9006/7016		9006/7016	9006/7016		9006/7016
Ambient temperature max.	°C	40		40	40		40
Noise level	dB(A)	<70		<70	<70		<70

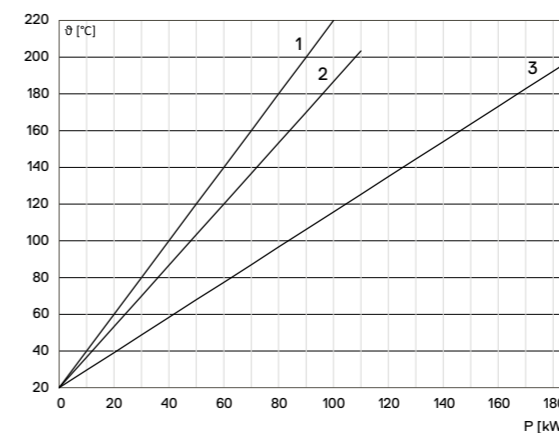
* Water treatment recommended from 140 °C / 284 °F and required from 180 °C / 356 °F

Note

- G Parallel thread
- IG Female thread
- SK Low-scale cooler
- D Dual zone unit
- 11 Dual zone unit: Data per zone
- 12 With frequency converter only

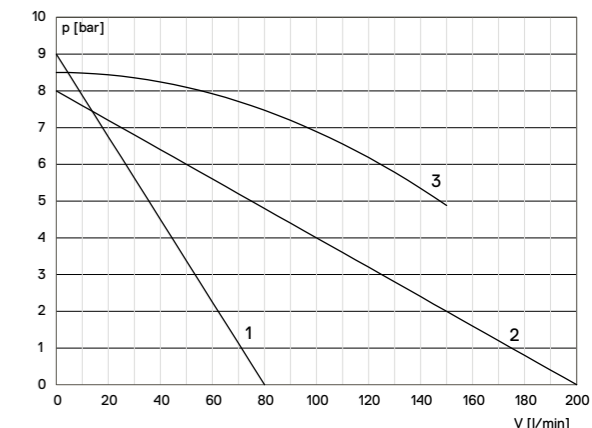
Cooling- and pump capacity

Cooling capacity P depending on the outlet temperature ϑ
Cooling water data at inlet temperature +20 °C
Curve 1/2 »Flow-rate per circuit 20l/min«
Curve 3 »Flow-rate per circuit 30l/min«



- 1 P180LD, P200LD SK
- 2 P180LD 2SK, P200LD 2SK
- 3 P181XL SK, P200XL SK

Pump capacity. Flow rate V depending on the pressure p
Bypass is not taken into consideration. Density 1000kg /m³



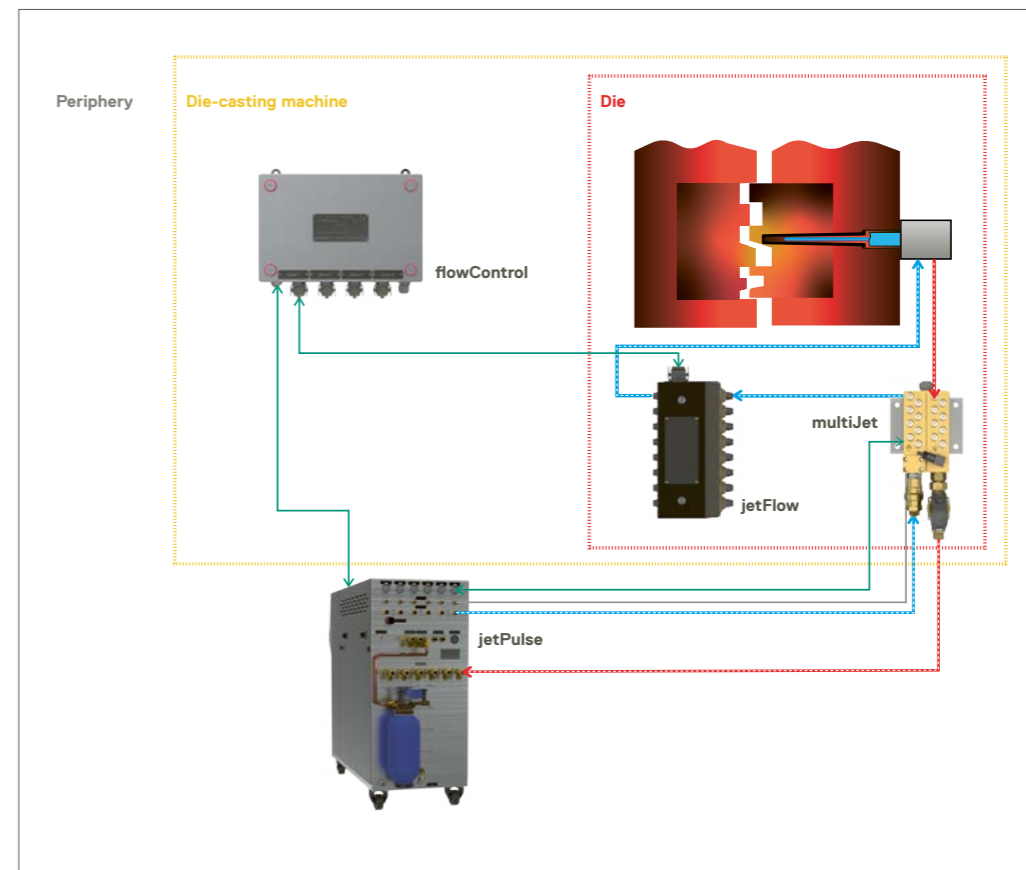
- 1 SM82H
- 2 SM85H
- 3 PM85H

jetPulse

Cooling of hot-spots



jetPulse		80 °C	
Temperature control solution/Type		jetPulse 30L	jetPulse 100L
Outlet temperature max.	°C/°F	80/176	80/176
Heat transfer medium		Water	Water
Filling quantity	l	30	100
Cooling channels		4	6
Cooling capacity at outlet temperature	kW °C	20 70	30 / 60 70
Pump capacity/Type		CRNE1-15	CRNE3-15
Flow rate max.	l/min.	50	100
Power consumption	kW	4.0	7.5
Pressure max.	bar	30	30
Control system		SPS	SPS
Operating voltage	V; Hz	380-500; 50/60	380-500; 50/60
External control voltage	V	24 VDC	24 VDC
Connections			
Connection compressed air		G1/4" (IG)	G1/4" (IG)
Outlet TCU compressed air		G1/4"/BSP 60°	G1/4"/BSP 60°
Cooling water		G1/2"	G1/2"
Inlet/Outlet TCU		G1/2"/BSP 60°	G1/2"/BSP 60°
Inlet Systemwater		G3/8"	G3/8"
Degree of protection	IP	IP54	IP54
Dimensions W/H/D	mm	350/966/1314	512/1140/1425
Weight	kg	150	250
Color	RAL	9006/7016	9006/7016
Ambient temperature max.	°C	40	40



jetPulse System components

multiJet – Distributor

- Distributor with 8 channels
- Up to 80 °C outlet temperature, water/air
- Interface with jetPulse
- Installation close to the tool
- Core breakage monitoring per zone
- Pressure monitoring
- Dimensions 303/188/149 mm
- Compressed air outlet connection G 1/4" BSP 60°
- Connections 60° outlet/inlet G 1/2" BSP 60°
- Connections outlet/inlet core d6 / G 1/8" IG



Control

- Via jetPulse

jetFlow – Flow measurement

- Individual flow monitoring per channel
- Up to 95 °C outlet temperature, water/air
- Flow measurement of 0.7 – 30 l/min
- Interface with flowControl
- Up to 8 channels
- Dimensions 130/230/96 mm
- Connections outlet/inlet with d6 / G 1/4" IG
- Control via flowControl

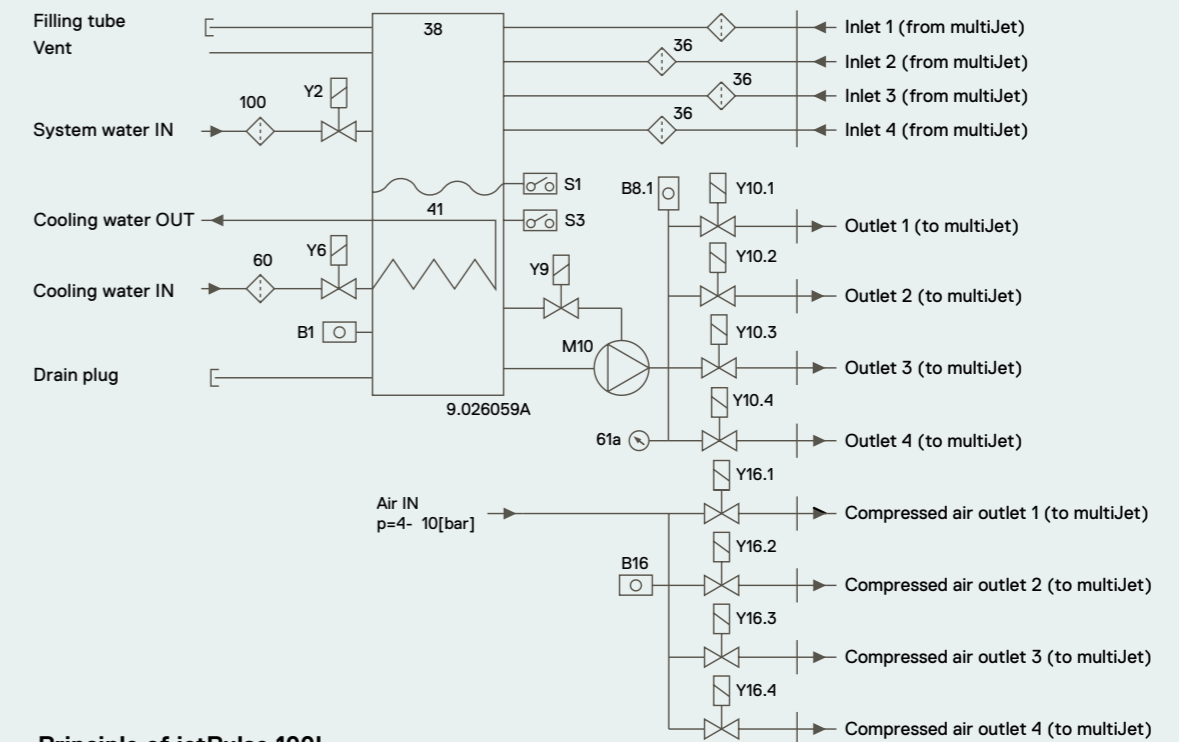


flowControl – Monitoring

- PLC control system for monitoring the flow on the jetFlow
- Monitoring of 4 or 6 zones
- Interface with jetPulse (Profinet) and jetFlow
- Dimensions 300/200/130 mm
- Control via jetPulse



jetPulse Principle diagram



Principle of jetPulse 100L

- 36 Circuit filter
- 38 Tank
- 41 Refrigerator
- 60 Cooling water filter ON
- 61a Outlet manometer
- 100 System water filter
- B1 Internal probe
- B8.1 Outlet pressure sensor
- B16 Distributor pressure sensor, internal
- M10 Pump motor
- S1 Float switch (top level)
- S3 Float switch (bottom level)
- Y2 Solenoid valve autom. water top-up
- Y6 Solenoid valve cooling
- Y9 Solenoid valve bypass
- Y10 Solenoid valve outlet
- Y16 Solenoid valve compressed air

The basics and benefits of temperature control for die casting

The thermal conditions inside the die should be well understood because mastering them has a decisive influence on the quality of the die cast parts. The amount of heat absorbed by the heat transfer medium is dissipated via the temperature control unit. For this heat dissipation, the mold temperature plays an exceptionally important role. Additional factors such as melt temperature and filling time also have an influence on part quality. Nevertheless, one should take note that a very high proportion of scrap is primarily due to unsuitable die temperatures.

To prevent this, the temperature control unit makes a significant contribution and

- heats the die to operating temperature
- keeps the die at operating temperature

If the temperature control is ideally adjusted, this literally pays off through optimum cycle times, a long service life of the mold and a consistently high quality of the die cast parts.

Selection of the optimum temperature control unit

When selecting the temperature control unit, the following criteria determine the performance profile of the temperature control system:

Parameter	Purpose
processed material	die temperature
die temperature	heat transfer medium (water/oil)
die weight & heating time	heating capacity
quantity processed per time unit	cooling capacity
temperature gradient over the die	flow rate
pressure and flow conditions in the die	delivery pressure of the pump

Temperature control in process

The temperatures in the die vary locally and change periodically with the casting cycle. The level of the periodically changing temperature over the entire cavity must be consistent for the quality of the die castings. Temperature control systems keep the preheating temperature of the die constant during production while limiting the maximum surface temperature. They ensure that the differential band of these two temperatures does not drift up or down during production.

Working economically with temperature control units

Correctly designed temperature control units offer numerous advantages for production. Used in a targeted manner, they help to run the production process economically at various levels.

Regloplas TCUs ensure

- Increased die life
- Lower production costs
- Increased productivity
- Improved quality

The control of the thermal conditions in the die casting die decisively determines the quality of the die casting parts.

The detailed article on temperature control of die casting can be found [here](#).



Innovative temperature control technology for over 60 years.

REGLOPLAS

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